

Listing of Claims

1. (Previously Amended) A switch which comprises:
 - a. a tilt-sensitive transducer that produces an output signal in response to a user manipulating said transducer;
 - b. a differentiator adapted to receive said output signal and to determine a rate-of-change of said output signal;
 - c. means, connected to said differentiator, for performing a first switching function based at least in part on the determined rate-of-change.
2. (Previously Amended) A switch as claimed in Claim 1 in which said tilt-sensitive transducer comprises a transducer that produces an output signal proportional to a manipulation of the transducer.
3. (Previously Presented) A switch as claimed in Claim 1 in which said tilt-sensitive transducer comprises a transducer that produces an output signal proportional to a tilting input.
4. (Previously Amended) A switch which comprises:
 - a. a tilt-sensitive transducer that produces an output signal in response to a user input;
 - b. a first differentiator adapted to receive said output signal and adapted to determine a first derivative of said output signal;
 - c. a second differentiator connected to said first differentiator adapted to determine a second derivative of said output signal representing a rate-of-change of the output signal; and
 - d. means, connected to said second differentiator, for performing a first switching function based at least in part on the rate-of-change of the output signal.
5. (Previously Presented) A switch as claimed in Claim 4 which further comprises means, connected to said first differentiator, for performing a second switching function.
- 6.-8. (Canceled)

9. (Previously Amended) A method which comprises:
 - a. producing an output signal in response to a user input;
 - b. differentiating said output signal with respect to time and determining a rate-of-change of said output signal; and
 - c. performing a first switching function in response to said differentiated output signal based on said rate-of-change.
10. (Original) A method as claimed in Claim 9 in which said producing step comprises:
 - a. attaching a transducer to a person; and
 - b. body-member actuating said transducer.
11. (Previously Presented) A method as claimed in Claim 9 in which:
 - a. said method further comprises differentiating said output signal a second time; and
 - b. said performing step comprises performing said first switching function in response to said second differentiating step.
12. (Previously Presented) A method as claimed in Claim 9 in which:
 - a. said differentiating step comprises differentiating said output signal a second time; and
 - b. said method further comprises performing a second switching function in response to said second differentiating step.
13. (Previously Presented) A method as claimed in Claim 9 in which said method further comprises:
 - a. performing said first switching function when said output signal is increasing; and
 - b. performing a second switching function when said output signal is decreasing.
14. (Previously Presented) A method as claimed in Claim 9 in which said method further comprises:
 - a. performing said first switching function when said output signal is increasing;

b. performing a second switching function when said output signal is decreasing;

and

c. producing a logic output as a function of both of said switching functions.

15. (Previously Amended) A method which comprises:

a. body-member tilting a first tilt-sensitive transducer;

b. producing a first output signal proportional to said tilting step;

c. differentiating said first output signal with respect to time and determining a rate-of-change; and

d. performing a first switching function in response to said differentiated first output signal based on said rate-of-change.

16. (Previously Presented) A method as claimed in Claim 15 in which said method further comprises:

a. body-member tilting a second tilt-sensitive transducer;

b. producing a second output signal proportional to said tilting of said second tilt-sensitive transducer;

c. differentiating said second output signal with respect to time; and

d. performing a logic output as a function of said first and second differentiated output signals.

17. (Previously Presented) A method as claimed in Claim 15 in which said performing step comprises performing a switching function that includes momentary contact switching, and said method further comprises:

a. initiating a sequential plurality of time delays in which one is a window of opportunity;

b. refraining from said momentary-contact switching step during a first time delay that follows said initiating step;

- c. performing said momentary-contact switching step within said window of opportunity that follows said first time delay;
- d. refraining from said momentary-contact switching step during a second time delay that follows said window of opportunity; and
- e. initiating operation of a first electrical device subsequent to successful completion of the preceding steps.

18. (Canceled)

19. (Previously Presented) A method as claimed in Claim 17 in which said method further comprises:

- a. momentary-contact switching during said second time delay; and
- b. initiating operation of a second electrical device in response to said momentary-contact switching step occurring during said second time delay.

20.-30. (Canceled)

31. (Previously Amended) A method which comprises:

- a. body-member actuating a transducer;
- b. producing an output signal proportional to said body-member actuating step;
- c. determining a rate-of-change of said output signal; and
- d. performing a switching function in response to said rate-of-change of said output signal.

32. (Previously Presented) A method as claimed in Claim 31 in which:

- a. said producing step comprises producing an output signal that increases and decreases; and
- b. said performing step comprises performing said switching function whenever said rate-of-change of said increasing output signal reaches a predetermined magnitude.

33. (Previously Presented) A method as claimed in Claim 31 in which:

- a. said producing step comprises producing an output signal that increases and decreases; and
- b. said performing step comprises performing said switching function whenever said rate-of-change of said decreasing output signal reaches a predetermined magnitude.

34. (Previously Presented) A method as claimed in Claim 31 in which said method further comprises controlling an apparatus in response to said output signal.

35. (Previously Presented) A method as claimed in Claim 31 in which said method further comprises activating control of any apparatus in response to said switching function.

36. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises activating control of an apparatus in response to said switching function.

37. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises controlling an apparatus in response to said output signal.

38. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises activating control of an apparatus in response to said switching function being performed inside a window of opportunity.

39. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises:

- a. activating control of an apparatus in response to said switching function being performed inside a window of opportunity; and
- b. aborting said activating step in response to said switching function being performed outside said window of opportunity.

40. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises activating a shut-down function of an apparatus in response to said switching function.

41. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises activating a selected one of a first or a second apparatus in response to said switching function.

42. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises:

- a. activating a selected one of a first or a second apparatus in response to performing said switching function during a window of opportunity; and
- b. proportionally controlling a function of said selected apparatus as a function of said proportional output signal.

43. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises:

- a. activating a selected one of a first or a second apparatus in response to performing said switching function during a window of opportunity;
- b. selecting a function of said selected apparatus to be controlled; and
- c. said selecting step comprises performing an other switching function.

44. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises:

- a. activating a selected one of a first or a second apparatus in response to performing said switching function during a window of opportunity;
- b. selecting a function of said selected apparatus to be controlled;
- c. said selecting step comprises performing an other switching function;
- d. controlling said selected function; and
- e. said controlling step comprises performing still an other switching function.

45. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises:

- a. initiating cascading a plurality of task opportunities;
- b. selecting a task; and

- c. said selecting step comprises performing said switching function.

46. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises:

- a. initiating cascading a plurality of task opportunities;
- b. selecting a task;
- c. said selecting step comprises performing said switching function;
- d. selectively controlling said task; and
- e. said selective controlling step comprises performing an other switching function.

47. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises:

- a. initiating cascading a plurality of task opportunities; and
- b. said initiating step comprises performing said switching function.

48. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises:

- a. initiating cascading a plurality of task opportunities;
- b. said initiating step comprises performing said switching function;
- c. selecting a task; and
- d. said selecting step comprises performing an other switching function.

49. (Previously Presented) A method as claimed in Claim 76 in which said method further comprises:

- a. initiating cascading a plurality of task opportunities;
- b. said initiating step comprises performing said switching function;
- c. selecting a task;
- d. said selecting step comprises performing an other switching function;
- e. selectively controlling said task; and
- f. said selective controlling step comprises performing still an other switching function.

50. (Previously Presented) A method which comprises:

- a. body-member producing first and second proportional output signals; and
- b. controlling both first and second proportional functions and a switching function of an apparatus in response to said output signals, wherein the switching function is controlled based on a rate-of-change of at least one of said first and second proportional output signals.

51. (Original) A method as claimed in Claim 50 in which said controlling step of said switching function comprises differentiating one of said output signals.

52. (Previously Presented) A method as claimed in Claim 50 in which:

- a. said body-member producing step comprises producing output signals that change in both increasing and decreasing directions; and
- b. said controlling step further comprises controlling said switching function in response to a rate-of-change of one of said output signals that exceeds a predetermined magnitude when said one output signal is changing in a selected one of said directions.

53-61. (Canceled)

62. (Previously Amended) A switch which comprises:

- a. a mechanical-to-electrical tilt-sensitive transducer;
- b. a differentiator configured to determine a rate-of-change and connected to said tilt-sensitive transducer; and
- c. a comparator connected to said differentiator, said comparator configured to perform a first switching function based at least in part on the determined rate-of-change.

63. (Previously Amended) A switch which comprises:

- a. a transducer that produces increasing and decreasing output signals proportional to user actuation in first and second directions; and

b. means for determining a rate-of-change of the output signal and for producing a switching function in response to a predetermined rate-of-change of said output signal produced by user actuation of said transducer in one of said directions.

64-73. (Canceled)

74. (Previously Presented) A switch as claimed in Claim 63 in which said switch comprises means for producing a second switching function in response to a predetermined rate-of-change of said output signal produced by user actuation of said transducer in the other of said directions.

75. (Previously Presented) A switch as claimed in Claim 63 in which:

a. said switch comprises means for producing a second switching function in response to a predetermined rate-of-change of said output signal produced by user actuation of said transducer in the other of said directions; and

b. said switch further comprises means for producing a third switching function.

76. (Previously Amended) A method which comprises:

a. producing an output signal;

b. determining a first rate-of-change of said output signal;

c. selectively performing a switching function in response to said output signal and based at least in part on said first rate-of-change exceeding a predetermined rate-of-change threshold;

d. determining a second rate-of-change of said output signal; and

e. preventing variations in said output signal from performing said switching function based at least in part on said second rate-of-change not exceeding said predetermined rate-of-change threshold.

77. (Previously Presented) A method as claimed in Claim 76 in which said producing step comprises actuating an input.

78. (Previously Presented) A method as claimed in Claim 76 in which said producing step comprises body-member actuating an input.

79. (Previously Amended) A method as claimed in Claim 76 in which said selectively performing step further comprises selectively adjusting said predetermined rate-of-change threshold.

80. (Previously Amended) A method as claimed in Claim 76 in which at least one of said determining steps comprises differentiating said output signal.

81. (Previously Amended) A method which comprises:

- a. producing an output signal that is a function of an input;
- b. controlling an apparatus in response to said output signal;
- c. determining a rate-of-change of the output signal
- d. performing a switching function in response to said determined rate-of-change exceeding a predetermined rate-of-change of said output signal.

82. (Previously Presented) A method as claimed in Claim 81 in which said producing step comprises body-member actuating said input.

83. (Previously Presented) A method as claimed in Claim 81 in which said performing step further comprises selectively adjusting said predetermined rate-of-change of said output signal.

84. (Previously Amended) A method as claimed in Claim 81 in which said performing step comprises comparing said determined rate-of-change with said predetermined rate-of-change of said output signal.

85. (Previously Amended) A method which comprises:

- a. performing a body-member gesture;
- b. controlling an output signal in response to said body-member gesture;
- c. maintaining a switch output status irrespective of said body-member gesture; and

d. determining a rate-of-change of said output signal
e. changing said switch output status in response to said determined rate-of-change exceeding a predetermined value.

86. (Previously Presented) A method as claimed in Claim 85 in which said method further comprises controlling an apparatus in response to said body-member gesture.

87. (Previously Amended) A method as claimed in Claim 85 in which said method further comprises selectively adjusting said predetermined value.

88. (Previously Amended) A method as claimed in Claim 85 in which said determining step comprises differentiating said output signal.

89. (Previously Amended) A method which comprises:

a. performing a body-member gesture;
b. controlling an output signal in response to said body-member gesture;
c. maintaining a switch output status irrespective of said controlling step;
d. determining a rate-of-change of said output signal; and
e. changing said switch output status in response to said determined rate-of-change exceeding a predetermined rate-of-change of said output signal.

90. (Previously Presented) A method as claimed in Claim 89 in which said method further comprises initiating control of an apparatus in response to said output signal.

91. (Previously Presented) A method as claimed in Claim 89 in which said method further comprises controlling an apparatus in response to said output signal.

92. (Previously Presented) A method as claimed in Claim 89 in which:

a. said performing step comprises increasing and decreasing said output signal; and
b. said changing step comprises changing said switch output status in response to said increasing output signal.

93. (Previously Presented) A method as claimed in Claim 89 in which:

- a. said performing step comprises increasing and decreasing said output signal; and
- b. said changing step comprises changing said switch output status in response to said decreasing output signal.

94. (Previously Presented) A method as claimed in Claim 89 in which:

- a. said performing step comprises producing increasing and decreasing output signals;
- b. said changing step comprises changing said switch output status in response to said increasing output signal; and
- c. said method further comprises performing an other switching function in response to said decreasing output signal.

95. (Previously Presented) A method as claimed in Claim 89 in which said changing step comprises differentiating said output signal.

96. (Previously Presented) A switched as claimed in Claim 1 wherein the output signal is related to a change in orientation of the transducer.